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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/982,861	10/22/2001	Keiji Yurugi	Q66372	7705

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WASHINGTON, DC 20037

EXAMINER

PUTTLITZ, KARL J

ART UNIT	PAPER NUMBER
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1621

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/982,861

Applicant(s)

YURUGI ET AL.

Examiner

Karl J. Puttlitz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-8 and 10-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 10 and 12 is/are allowed.
- 6) ☒ Claim(s) 1-3,5-8,11 and 13-21 is/are rejected.
- 7) ☒ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

The outstanding prior art rejection is maintained and repeated below:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-8, 11, and 13-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vansteenkiste et al. Preparation of Tailor-Made Multifunctional Propenyl Ethers by Radical Copolymerization of 2-(1-Propenyl)oxyethyl Methacrylate, *Macromolecules* 1999, 32, 55-59 (Vansteenkiste) in view of Bauer.

Vansteenkiste teaches Synthesis of POMEA, from methacrylic acid and methacrylic anhydride. The reaction mixture contains triethylamine. The reference teaches that the reaction organic layer is dried over magnesium sulfate. One of ordinary skill would recognize that the claimed limitation of water and oxygen content are necessarily met by this reaction See Page 56, left column.

The difference between the rejected claims and the disclosure of Vanstenkiste is that the reference fails to state that a radical polymerization

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inhibitor is added to the reaction. It is for this proposition that the examiner adds Bauer (of record). In this connection, Bauer teaches that it is helpful to add polymerization inhibitors to solutions of polymerizable compounds. See column 5. Accordingly, one of ordinary skill would have been motivated to add a polymerization inhibitor to the reaction mixture in order to inhibit polymerization of the desired compounds. Therefore the rejected claims are prima facie obvious in view of the combination of Vanstenkiste and Bauer since these references teach the claimed invention with a reasonable expectation of success.

With regard to claims 10 and 12, Vaneteenkiste does not specifically describe or fairly suggest the oxygen content during the reaction. If the reaction of Vaneteenkiste is carried out under an ordinary air atmosphere, it does not satisfy the oxygen content presently claimed because the oxygen content in ordinary air is about 21%.

Again, Applicant argues that the polymerization inhibitor is added during the reaction for inhibition of polymerization of (meth)acrylic acid lower alkyl ester (col. 5, lines 41-43). In contrast, present claim 1 as amended specifically recites that the vinyl ether group-containing (meth)acrylic ester in the composition is used as an end product. However, the term "end product" is deemed as an intended use. Notwithstanding this use, the composition suggested by the references suggests the claimed compositions.

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Further, Applicant argues that the Vansteenkiste crude product does not satisfy the presently claimed ratios of the radical polymerization inhibitor and the vinyl ether group-containing (meth) acrylic ester in claims 1 and 3, nor those of the radical polymerization inhibitor, the basic compound and the vinyl ether group-containing (meth) acrylic ester in claims 2 and 16, relative to the vinyl ether group-containing (meth) acrylic ester composition.

However, the examiner points out that the composition in Vansteenkiste is concentrated, and one of ordinary skill would expect that the claimed elements to be within the claimed range under such concentration.

Applicant also argues that, with respect to the term "handling," Applicants have amended claims 5 to 7 to replace "handling" with --transporting, storing or transferring--. This recitation clearly does not include the drying and vacuum steps disclosed in Vansteenkiste. However, the product is stored under vacuum, and thus meets the claim.

Applicant also argues that in Vansteenkiste's vacuum distillation is carried out with continuous decompression by a vacuum pump. Thus, in the vessel in which the product is contained, the air which was in the gaseous phase of reaction vessel is continuously suctioned out. That is, the oxygen concentration in the gaseous phase of the vessel decreases with the passage of time. Accordingly, Applicants respectfully submit that the oxygen content in Vansteenkiste is lower than the lower limit (0.01% by volume) specified in the present claims 5 and 7.

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However, those of ordinary skill would recognize that at some point in the vacuum process, the oxygen content of the vessel would be within the range claimed in claims 5 and 7.

Allowable Subject Matter

Claims 10 and 12 are allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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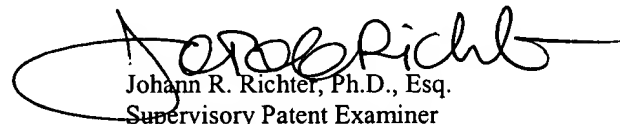
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl J. Puttlitz whose telephone number is (571) 272-0645. The examiner can normally be reached on Monday-Friday (alternate).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on (571) 272-0646.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist.

Karl J. Puttlitz
Assistant Examiner

A handwritten signature in black ink, appearing to read 'J. Richter', with a large, sweeping loop at the end.

Johann R. Richter, Ph.D., Esq.
Supervisory Patent Examiner
Biotechnology and Organic Chemistry
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